IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of:)

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Applicants: Louis A. Schick, et al.   )   Examiner: Fisher, Michael J.

)

Serial No.: 09/736,495   )   Group Art Unit: 3629

)

Filed: 12/13/2000   )   Confirmation No.: 3646

)

Title: System And Method For   )   Docket No.: 20-LC-2099/624226-
      Managing A Fleet Of Remote)   289
      Assets   )

_____)

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APPELLANT'S BRIEF UNDER 37 CFR 41.10

      This brief is in furtherance of the Notice of Appeal filed in this application on June 20, 2007.

1.   REAL PARTY IN INTEREST - 37 CFR 41.37(c)(1)(i)

The real party in interest in the present Appeal is the assignee of record of the present application, General Electric Company.

2.   RELATED APPEALS AND INTERFERENCES - 37 CFR 41.37(c)(1)(ii)

To the best of our knowledge, there is no other appeal, interference or judicial proceeding that is related to or that will directly affect, or that will be directly affected by, or that will have a bearing on the Board's decision in this Appeal.

3.   STATUS OF CLAIMS - 37 CFR 41.37(c)(1)(iii)

Claims cancelled: 12-14 and 32-36.

Claims withdrawn but not cancelled: none.

Claims pending: 1-11, 15-31 and 37-47.

Claims allowed: none.

Claims rejected: 1-11, 15-31 and 37-47.

Claim rejections appealed: 1-11, 15-31 and 37-47.

4.   STATUS OF AMENDMENTS - 37 CFR 41.37(c)(1)(iv)

There is no amendment filed subsequent to final rejection.

5.   SUMMARY OF CLAIMED SUBJECT MATTER- 37 CFR 41.37(c)(1)(v)

Claim 1

Independent claim 1 is directed to a computerized method for managing a plurality of mobile assets (e.g., locomotives 12, vehicles 26, as seen in FIG. 1) using information indicative of actual usage of each asset. The method allows collecting data regarding each of a plurality of mobile assets. See page 5, lines 14-25. See also page 30, lines 30-31 through page 31, lines 1-2 of the specification. The method further allows providing a set of rules including

relationships for processing the collected data to determine a plurality of operational modes for each asset. Each of the operational modes is associated with a distinct level of wear in an asset. See page 13, lines 11-30 and Tables 1 and 2 in pages 14 and 15 of the specification. The data is processed relative to the set of rules to develop historical information regarding actual usage of each mobile asset. See page 26, lines 3-5 and Table 3 of the specification. The information for the actual usage is arranged to list a plurality of operational modes accumulated for the asset over a selectable period of time. See page 23, lines 12-32 through page 24, lines 1-4 of the specification and Figs. 13 and 14 of the drawings. The information is distributed via a global information network 15 (FIG. 1). See page 8, lines 13-14 of the specification.

Claim 2

Claim 2 depends from claim 1 and further recites that the historical information regarding actual usage of the asset is enhanced with environmental data collected during the actual usage of the asset. The environmental data includes at least one environmental parameter contributing to the level of wear of the asset. See page 6, lines 21-24 and page 29, lines 15-18.

Claim 15

Claim 15 is directed to a computerized method for managing a plurality of mobile assets, e.g., locomotives 12, vehicles 26, as seen in FIG. 1. Claim 15 recites collecting data regarding each of a plurality of mobile assets and processing the collected data to develop historical information regarding actual usage of each mobile asset. See page 26, lines 3-5 and Table 3 of the specification. Claim 15 further recites posting to an operator of a respective mobile asset, based on the collected data, reminder information to ensure compliance of any applicable regulatory requirements. See page 29, lines 11-23 of the specification. See also page 24, lines 11-18, and Table 6 at page 27 of the specification.

Claim 16

Independent claim 16 is directed to a computerized method for managing a plurality of mobile assets, e.g., locomotives 12, trucks 26, as seen in FIG. 1. Claim 16 recites collecting operator data regarding the operating of each one of a plurality of mobile assets by a respective operator. See page 29, lines 11-23 of the specification. Claim 16 further recites processing the data to develop historical information regarding the operation of the mobile asset by the respective operator, and posting to the operator, based on the collected data, reminder information to ensure compliance of any applicable regulatory requirements. See page 24, lines 11-18, and Table 6 at page 27 of the specification.

Claim 20

Independent claim 20 is directed to a computerized method for managing a plurality of mobile assets (e.g., locomotives 12, trucks 26 as seen in FIG. 1) using information indicative of actual usage of each asset. Claim 20 recites collecting data regarding each of a plurality of mobile assets. See page 5, lines 14-25. See also page 30, lines 30-31 through page 31, lines 1-2 of the specification. A set of rules is provided. The set of rules contains relationships for processing the collected data to determine a plurality of operational modes for each asset. Each of the operational modes is associated with a distinct level of wear in an asset. See page 13, lines 11-30 and Tables 1 and 2 in pages 14 and 15 of the specification. Claim 20 further recites processing the data relative to the set of rules to develop historical information regarding actual usage of each mobile asset. See page 26, lines 3-5 and Table 3 of the specification. The information regarding the actual usage of the asset is arranged to list a plurality of operational modes accumulated for the asset over a period of time. See page 23, lines 12-32 through page 24, lines 1-4 of the specification and Figs. 13 and 14 of the drawings.

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Claim 21

Independent claim 21 is directed to a computerized method for managing a plurality of mobile assets (e.g., locomotives 12, trucks 26 as seen in FIG. 1) using information indicative of actual usage of each asset. Claim 21 recites collecting data regarding each of a plurality of mobile assets See page 5, lines 14-25. See also page 30, lines 30-31 through page 31, lines 1-2 of the specification. A set of rules is provided. The set of rules contains relationships for processing the collected data to determine a plurality of operational modes for each asset. Each of the operational modes is associated with a distinct level of wear in an asset. See page 13, lines 11-30 and Tables 1 and 2 in pages 14 and 15 of the specification. Claim 21 further recites processing the data relative to the set of rules to develop historical information regarding actual usage of each said mobile asset. See page 26, lines 3-5 and Table 3 of the specification. The historical information is classified based on a plurality of operational modes accumulated for the asset over a selectable period of time. See page 23, lines 12-32 through page 24, lines 1-4 of the specification and Figs. 13 and 14 of the drawings. The historical information is used to generate recommended operational settings for each asset so as to increase the performance and operating life of the mobile asset system. See page 28, Table 8 of the specification. See also page 31, lines 5-7 of the specification.

Claim 22

Independent claim 22 is directed to a system for managing a fleet of mobile assets (e.g., locomotives 12, trucks 26 as seen in FIG. 1) using information indicative of actual usage of each asset. Claim 22 recites a data gathering element configured to collect data regarding each of a plurality of mobile assets. See page 5, lines 14-25. Claim 22 further recites a memory device for storing a set of rules comprising relationships for processing the collected data to determine a plurality of operational modes for each asset. Each

of the operational modes is associated with a distinct level of wear in an asset. See page 13, lines 11-30 and Tables 1 and 2 in pages 14 and 15 of the specification. A processor is configured to process the collected data relative to the set of rules to develop historical information regarding actual usage of each mobile asset. See page 26, lines 3-5 and Table 3 of the specification. See also FIG. 4 of the drawings. The information for the actual usage is arranged to list a plurality of operational modes accumulated for the asset over a selectable period of time. See page 23, lines 12-32 through page 24, lines 1-4 of the specification and Figs. 13 and 14 of the drawings. A data link 20 (FIG. 1) is in communication with a global information network 15 for distributing information related to the plurality of mobile assets. See page 11, lines 20-32 through page 12, lines 1-19 of the specification

Claim 23

Independent claim 23 is directed to a system for managing vehicles using information indicative of actual usage of each asset. Claim 23 recites a plurality of sensors carried on a vehicle for generating data indicative of the operation of the vehicle. See page 5, lines 14-25. A memory device is carried on the vehicle for storing a set of rules including relationships for processing the generated data to determine a plurality of operational modes for each asset. Each of the operational modes is associated with a distinct level of wear in an asset. See page 13, lines 11-30 and Tables 1 and 2 in pages 14 and 15 of the specification. Claim 23 further recites a processor carried on the vehicle for processing the generated data relative to the set of rules to develop information indicative of the operation of the vehicle for its useful life. See page 26, lines 3-5 and Table 3 of the specification. See also FIG. 4 of the drawings. A transmitter transmits the information to a global information network for communication to interested parties. See page 11, lines 20-32 through page 12, lines 1-19 of the specification.

Claim 24

Independent claim 24 is directed to a system for managing vehicles using information indicative of actual usage of each asset. Claim 24 recites a plurality of sensors carried on a vehicle for generating data indicative of the operation of the vehicle. See page 5, lines 14-25. A transmitter transmits data from the vehicle to a data center. A receiver at the data center receives data transmitted from the vehicle. See page 11, lines 20-32 through page 12, lines 1-19 of the specification. A memory device at the data center stores a set of rules comprising relationships for processing data received at the data center to determine a plurality of operational modes for each asset. Each of the operational modes is associated with a distinct level of wear in an asset. See page 13, lines 11-30 and Tables 1 and 2 in pages 14 and 15 of the specification. Claim 24 further recites a processor at the data center for processing the received data relative to the set of rules to develop information indicative of the operation of the vehicle over the useful life of the vehicle. See page 26, lines 3-5 and Table 3 of the specification. See also FIG. 4 of the drawings. A data link at the data center transfers data indicative of the operation of the vehicle to a global information network for communication to interested parties. See page 5, lines 19-25 of the specification

Claim 25

Independent claim 25 is directed to a system for managing a vehicle within a fleet of vehicles using information indicative of actual usage of each asset. Claim 25 recites a plurality of sensors carried on a vehicle for generating data indicative of the operation of the vehicle. See page 5, lines 14-25. A memory device gathers and records operational data for the life of the vehicle. A data link 20 (FIG. 1) communicates with the memory and with a global information network 15 for transferring information relating to the operation of the vehicle to the network. See page 11, lines 20-32 through page 12, lines 1-19 of the specification. Claim 25 further recites a first processor configured to process the

operational data relative to a set of rules comprising relationships for processing the operational data to determine a plurality of operational modes for the vehicle. Each of the operational modes is associated with a distinct level of wear in a vehicle to develop individual historical information regarding actual usage of each vehicle. See page 13, lines 11-30 and Tables 1 and 2 in pages 14 and 15 of the specification. The information for the actual usage is arranged to list the plurality of operational modes of the vehicle. See page 26, lines 3-5 and Table 3 of the specification. A second processor accesses a data base of fleet historical information data relating to the operation of other vehicles in the fleet corresponding to the vehicle and evaluating the individual historical information for the vehicle in light of the fleet historical information from the other vehicles in the fleet. See page 23, lines 19-31 of the specification and FIG. 13 of the drawings.

Claim 26

Independent claim 26 is directed to a computerized method for managing a plurality of mobile assets. Claim 26 recites collecting data regarding each of a plurality of mobile assets, e.g., locomotives 12, trucks 26 as seen in FIG. 1. The data is processed to develop historical information regarding actual usage of each mobile asset. See page 26, lines 3-5 and Table 3 of the specification. The actual usage is arranged in a plurality of operational modes of the asset. Each of the operational modes is indicative of a respective state of health of the asset. See page 23, lines 31-32 through page 24, lines 1-4 of the specification and FIGs. 13 and 14 of the drawings. Claim 26 further recites establishing a cost/benefit evaluation of the mobile asset for a proposed future plan of use in light of the state of health of the mobile asset. See page 28, lines 7-9 of the specification. The information is distributed via a global information network 15 (FIG. 1).

Claim 30

Independent claim 30 is directed to a computerized method for managing a plurality of mobile assets. Claim 30 recites collecting data regarding each of a plurality of mobile assets having warranties covering the operation of the mobile assets, e.g., locomotives 12, trucks 26 as seen in FIG. 1. The data is processed to develop historical information regarding actual usage of each mobile asset. See page 26, lines 3-5 and Table 3 of the specification. The actual usage is arranged in a plurality of operational modes of the asset. See page 23, lines 12-32 through page 24, lines 1-4 of the specification and Figs. 13 and 14 of the drawings. Claim 30 further recites determining the remaining warranty coverage of each respective mobile asset based on the actual usage of the asset. See page 25, lines 6-10 of the specification. The information is distributed via a global information network 15 (FIG. 1).

6.   GROUNDS OF REJECTION TO BE REVIEWED UPON APPEAL -
      37 CFR 41.37(c)(1)(vi)

A)   Whether claims 1-6, 10, and 20-30 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,330,499 (hereinafter Chou).

B)   Whether claims 7-9, 11, 15-19, and 31-47 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chou.

7.   ARGUMENT-37 CFR 41.37(c)(1)(vii)

A.   *Regarding the rejection of claims 1-6, 10, and 20-30 under 35 U.S.C. 102(e) as being anticipated by* US patent No. 6,330,499 *(hereinafter referred to as Chou)*.

Appellant argues that Chou does not support a *prima facie* case of anticipation for claims 1-6, 10, and 20-30 because Chou fails to teach each of the claimed structural and/or operational relationships. With regard to the rejections applied against claims 1-6, 10, and 20-30, it is appellant's belief that not all of the rejected claims stand or fall together. For example, the independent claims set forth below are believed to be directed to different aspects of the present invention. More specifically, method claims 1, 3-6, and 10 stand together. Claims 2, 20-25 and 30 each stands by itself. Method claims 26-29 stand together.

The test for establishing a *prima facie* case of anticipation under §102 "requires the presence in a single prior art reference of each and every element of the claimed invention, arranged as in the claim." (Lindemann Maschinenfabrik GMbH v. American Hoist and Derrick Co., 730 F.2d 1452, 221 USPQ 481,485 (Fed. Cir. 1984)). Furthermore, "there must be no difference between the claimed invention and the referenced disclosure, as viewed by a person of ordinary skill in the field of the invention." Scripps Clinic and Research Found. v. Genentech Inc., 927 F.2d 1565, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991)). Absence from the reference disclosure of any claim element and/or operational interrelationship negates anticipation under §102.

A   *Arguments Regarding Claims 1, 3-6, and 10*

Chou is directed to system and method for vehicle diagnostic and health monitoring. More particularly, Chou describes a system 1000 for <u>fault monitoring</u> and diagnostics, such as any fault reported by electronic control units (ECUs) 103. See Chou at col. 4, lines 2-4, and lines 16-19. The client computer device 101 handles diagnostic trouble codes (DTCs) by listening for <u>vehicle faults</u> through the fault monitor 420. See Chou at col. 4, lines 54-55. The diagnostic engine 201A first determines if a <u>fault</u> or a potential <u>fault</u> is present by checking if any trouble code is reported. See Chou at col. 6, lines 6-8.

It is respectfully noted that the claimed invention is not directed to the <u>fault</u> monitoring aspects described by Chou. Claim 1 in part recites a set of rules comprising relationships for processing the collected data to determine a plurality of operational modes for each asset. Each of the operational modes is associated with a distinct level of wear in an asset. For example, as further elaborated at page 12, lines 20-32, page 13, lines 1-30, and shown in Tables 1 and 2 of the specification of the present invention, determining an operational mode (such as braking level, acceleration level, etc.), and associating a respective operational mode with a distinct level of wear of the asset is a very different concept than the <u>fault</u> monitoring aspects described by Chou.

It is felt that one skilled in the art would recognize that a fault, as described by Chou, has little to do with the operational modes set forth in the claimed invention. For instance, one skilled in the art would not analogize an operational mode, such as hard or soft braking, etc., to a fault. Although Chou may describe a data repository 203, such data repository is merely used for storing fault data and has virtually nothing to do with historical information regarding actual usage of each mobile asset, where the information for the actual usage is arranged to list a plurality of operational modes accumulated for the asset over a selectable period of time. Appellant believes it is a fundamental error to equate the fault data of Chou with the claimed operational modes. For example, although Chou may accumulate historical information of faults, Chou fails to

describe or suggest historical information regarding actual usage of the asset that lists a plurality of operational modes accumulated for the asset. Accordingly, it is not believed that there is any description or suggestion in Chou that meets each of the structural and/or operational relationships set forth in appellant's claim 1. Anticipation under 35 U.S.C. §102 requires that "The identical invention must be shown in as complete detail as contained in the ...claim." (Citations omitted) Accordingly, it is submitted that Chou fails to anticipate or otherwise render unpatentable claim 1. In view of the foregoing, it is believed that Chou fails to constitute a *prima facie* reference for sustaining a 102 rejection, and consequently the rejections of claim 1 (and claims depending there from) should be withdrawn.

Claims 3-6 and 10 depend from claim 1 and thus incorporate the structural and/or operational relationships set forth in claim 1 plus their own recitations. It is respectfully submitted that Chou also fails to anticipate such claims under the §102 statutory requirements and these rejections should be similarly withdrawn.

B   *Arguments Regarding Claim 2*

Claim 2 depends from claim 1 and thus incorporate the structural and/or operational relationships set forth in claim 1 plus its own recitations. Moreover, the excerpt cited by the Examiner for rejecting claim 2 (Chou col. 5, lines 53-60) fails to describe or suggest any historical information regarding actual usage of the asset that is enhanced with environmental data collected during the actual usage of the asset, as set forth in the claimed invention. Also the cited excerpt of Chou fails to describe or suggest that the environmental data includes at least one environmental parameter contributing to the level of wear of the asset. Accordingly, it is respectfully submitted that Chou also fails to anticipate claim 2 under the §102 statutory requirements and this rejection should be similarly withdrawn.

C   *Arguments Regarding Claim 20*

Claim 20 in part recites a set of rules comprising relationships for processing the collected data to determine a plurality of operational modes for each asset. Each of the operational modes is associated with a distinct level of wear in an asset. For example, as further elaborated at page 12, lines 20-32, page 13, lines 1-30, and shown in Tables 1 and 2 of the specification of the present invention, determining an operational mode (such as braking level, acceleration level, etc.), and associating a respective operational mode with a distinct level of wear of the asset is a very different concept than the fault monitoring aspects described by Chou.

Although Chou may describe a data repository 203, such a data repository is used for storing fault data and has virtually nothing to do with historical information regarding actual usage of each mobile asset, where the information for the actual usage is arranged to list a plurality of operational modes accumulated for the asset over a selectable period of time. Appellant believes it is a fundamental error to equate the fault data of Chou with the claimed operational modes. For example, although Chou may accumulate historical information of faults, Chou fails to describe or suggest historical information regarding actual usage of the asset that lists a plurality of operational modes accumulated for the asset.   Accordingly, it is not believed that there is any description or suggestion in Chou that meets each of the structural and/or operational relationships set forth in appellant's claim 20. Anticipation under 35 U.S.C. §102 requires that "The identical invention must be shown in as complete detail as contained in the …claim." (Citations omitted) Accordingly, it is submitted that Chou fails to anticipate or otherwise render unpatentable claim 20.

D   *Arguments Regarding Claim 21*

Chou is directed to system and method for vehicle diagnostic and health monitoring. More particularly, Chou describes a system 1000 for <u>fault monitoring</u> and diagnostics, such as any fault reported by ECUs 103. See Chou at col. 4,

lines 2-4, and lines 16-19. The client computer device 101 handles diagnostic trouble codes (DTCs) by listening for vehicle faults through the fault monitor 420. See Chou at col. 4, lines 54-55. The diagnostic engine 201A first determines if a fault or a potential fault is present by checking if any trouble code is reported. See Chou at col. 6, lines 6-8.

It is respectfully noted that the claimed invention is not directed to the fault monitoring aspects described by Chou. Claim 21 in part recites a set of rules comprising relationships for processing the collected data to determine a plurality of operational modes for each asset. Each of the operational modes is associated with a distinct level of wear in an asset. For example, as further elaborated at page 12, lines 20-32, page 13, lines 1-30, and shown in Tables 1 and 2 of the specification of the present invention, determining an operational mode (such as braking level, acceleration level, etc.), and associating a respective operational mode with a distinct level of wear of the asset is a very different concept than the fault monitoring aspects described by Chou.

Although Chou may describe a data repository 203, such a data repository is used for storing fault data and has virtually nothing to do either with historical information regarding actual usage of each mobile asset, where the information for the actual usage is arranged to list a plurality of operational modes accumulated for the asset over a selectable period of time or with using the historical information to generate recommended operational settings for each asset to increase the performance and operating life of the mobile asset system, as set forth in the claimed invention. Accordingly, it is not believed that there is any description or suggestion in Chou that meets each of the structural and/or operational relationships set forth in appellant's claim 21. Anticipation under 35 U.S.C. §102 requires that "The identical invention must be shown in as complete detail as contained in the ...claim." (Citations omitted) Accordingly, it is submitted that Chou fails to anticipate or otherwise render unpatentable claim 21.

E   *Arguments Regarding Claim 22*

Chou is directed to system and method for vehicle diagnostic and health monitoring. More particularly, Chou describes a system 1000 for <u>fault monitoring</u> and diagnostics, such as any fault reported by ECUs 103. See Chou at col. 4, lines 2-4, and lines 16-19. The client computer device 101 handles diagnostic trouble codes (DTCs) by listening for <u>vehicle faults</u> through the fault monitor 420. See Chou at col. 4, lines 54-55. The diagnostic engine 201A first determines if a <u>fault</u> or a potential fault is present by checking if any trouble code is reported. See Chou at col. 6, lines 6-8.

It is respectfully noted that the claimed invention is not directed to the fault monitoring aspects described by Chou. Claim 22 in part recites a memory device for storing a set of rules comprising relationships for processing the collected data to determine a plurality of operational modes for each asset. Each of the operational modes is associated with a distinct level of wear in an asset. For example, as further elaborated at page 12, lines 20-32, page 13, lines 1-30, and shown in Tables 1 and 2 of the specification of the present invention, determining an operational mode (such as braking level, acceleration level, etc.), and associating a respective operational mode with a distinct level of wear of the asset is a very different concept than the fault monitoring aspects described by Chou.

Although Chou may describe a data repository 203, such a data repository is used for storing fault data and has virtually nothing to do with historical information regarding actual usage of each mobile asset, where the information for the actual usage is arranged to list a plurality of operational modes accumulated for the asset over a selectable period of time. Appellant believes it is a fundamental error to equate the fault data of Chou with the claimed operational modes. For example, although Chou may accumulate historical information of faults, Chou fails to describe or suggest historical information regarding actual usage of the asset that lists a plurality of operational modes accumulated for the asset.   Accordingly, it is not believed that there is any

description or suggestion in Chou that meets each of the structural and/or operational relationships set forth in appellant's claim 22. Anticipation under 35 U.S.C. §102 requires that "The identical invention must be shown in as complete detail as contained in the ...claim." (Citations omitted) Accordingly, it is submitted that Chou fails to anticipate or otherwise render unpatentable claim 22.

F   *Arguments Regarding Claim 23*

Chou is directed to system and method for vehicle diagnostic and health monitoring. More particularly, Chou describes a system 1000 for fault monitoring and diagnostics, such as any fault reported by ECUs 103. See Chou at col. 4, lines 2-4, and lines 16-19. The client computer device 101 handles diagnostic trouble codes (DTCs) by listening for vehicle faults through the fault monitor 420. See Chou at col. 4, lines 54-55. The diagnostic engine 201A first determines if a fault or a potential fault is present by checking if any trouble code is reported. See Chou at col. 6, lines 6-8.

It is respectfully noted that the claimed invention is not directed to the fault monitoring aspects described by Chou. Claim 23 in part recites a memory device for storing a set of rules comprising relationships for processing the collected data to determine a plurality of operational modes for each asset. Each of the operational modes is associated with a distinct level of wear in an asset. For example, as further elaborated at page 12, lines 20-32, page 13, lines 1-30, and shown in Tables 1 and 2 of the publication document of the present invention, a processor configured to determine an operational mode (such as braking level, acceleration level, etc.), and associating a respective operational mode with a distinct level of wear of the asset is a very different concept than the fault monitoring aspects described by Chou.

Although Chou may describe a data repository 203, such a data repository is used for storing fault data and has virtually nothing to do either with determining a plurality of operational modes associated with a distinct level of wear in an asset, or with developing information indicative of the operation of the

vehicle for its useful life. Accordingly, it is not believed that there is any description or suggestion in Chou that meets each of the structural and/or operational relationships set forth in appellant's claim 23. Anticipation under 35 U.S.C. §102 requires that "The identical invention must be shown in as complete detail as contained in the ...claim." (Citations omitted) Accordingly, it is submitted that Chou fails to anticipate or otherwise render unpatentable claim 23.

G   _Arguments Regarding Claim 24_

Chou is directed to system and method for vehicle diagnostic and health monitoring. More particularly, Chou describes a system 1000 for <u>fault monitoring</u> and diagnostics, such as any fault reported by ECUs 103. See Chou at col. 4, lines 2-4, and lines 16-19. The client computer device 101 handles diagnostic trouble codes (DTCs) by listening for <u>vehicle faults</u> through the fault monitor 420. See Chou at col. 4, lines 54-55. The diagnostic engine 201A first determines if a <u>fault</u> or a potential fault is present by checking if any trouble code is reported. See Chou at col. 6, lines 6-8.

It is respectfully noted that the claimed invention is not directed to the fault monitoring aspects described by Chou. It is respectfully noted that the claimed invention is not directed to the fault monitoring aspects described by Chou. Claim 24 in part recites a memory device at the data center for storing a set of rules comprising relationships for processing the collected data to determine a plurality of operational modes for each asset. Each of the operational modes is associated with a distinct level of wear in an asset. For example, as further elaborated at page 12, lines 20-32, page 13, lines 1-30, and shown in Tables 1 and 2 of the present invention, determining an operational mode (such as braking level, acceleration level, etc.), and associating a respective operational mode with a distinct level of wear of the asset is a very different concept than the fault monitoring aspects described by Chou.

Although Chou may describe a data repository 203, such element is used for storing fault data and has virtually nothing to do either with determining a

plurality of operational modes and associating with each operational mode a distinct level of wear of the asset, or with developing information indicative of the operation of the asset for its useful life. Anticipation under 35 U.S.C. §102 requires that "The identical invention must be shown in as complete detail as contained in the ...claim." (Citations omitted) Accordingly, it is submitted that Chou fails to anticipate or otherwise render unpatentable claim 24.

H   *Arguments Regarding Claim 25*

Chou is directed to system and method for vehicle diagnostic and health monitoring. More particularly, Chou describes a system 1000 for <u>fault monitoring</u> and diagnostics, such as any fault reported by ECUs 103. See Chou at col. 4, lines 2-4, and lines 16-19.   The client computer device 101 handles diagnostic trouble codes (DTCs) by listening for <u>vehicle faults</u> through the fault monitor 420. See Chou at col. 4, lines 54-55. The diagnostic engine 201A first determines if a <u>fault</u> or a potential fault is present by checking if any trouble code is reported. See Chou at col. 6, lines 6-8.

It is respectfully noted that the claimed invention is not directed to the fault monitoring aspects described by Chou. Claim 25 in part recites a first processor configured to process the operational data relative to a set of rules comprising relationships for processing the operational data to determine a plurality of operational modes for the vehicle. Each of the operational modes is associated with a distinct level of wear in a vehicle to develop individual historical information regarding actual usage of each vehicle. The information for the actual usage is arranged to list the plurality of operational modes of the vehicle. Claim 25 further recites a second processor accessing a data base of fleet historical information data relating to the operation of other vehicles in the fleet corresponding to the vehicle and evaluating the individual historical information for the vehicle in light of the fleet historical information from the other vehicles in the fleet.

Although Chou may describe a data repository 203, such element is used for storing fault data and has virtually nothing to do either with developing

historical information regarding actual usage of each vehicle, where the information for the actual usage is arranged to list a plurality of operational modes of the vehicle or for evaluating the individual historical information of a given vehicle in light of fleet historical information from other vehicles in the fleet. Accordingly, it is not believed that there is any description or suggestion in Chou that meets each of the structural and/or operational relationships set forth in appellant's claim 25. Anticipation under 35 U.S.C. §102 requires that "The identical invention must be shown in as complete detail as contained in the ...claim." (Citations omitted) Accordingly, it is submitted that Chou fails to anticipate or otherwise render unpatentable claim 25.

I   _Arguments Regarding Claim 26-29_

Chou is directed to system and method for vehicle diagnostic and health monitoring. More particularly, Chou describes a system 1000 for fault monitoring and diagnostics, such as any fault reported by ECUs 103. See Chou at col. 4, lines 2-4, and lines 16-19. The client computer device 101 handles diagnostic trouble codes (DTCs) by listening for vehicle faults through the fault monitor 420. See Chou at col. 4, lines 54-55. The diagnostic engine 201A first determines if a fault or a potential fault is present by checking if any trouble code is reported. See Chou at col. 6, lines 6-8.

It is respectfully noted that the claimed invention is not directed to the fault monitoring aspects described by Chou. Claim 26 in part recites processing the data to develop historical information regarding actual usage of each mobile asset. The actual usage is arranged in a plurality of operational modes of the asset. Each of the operational modes is indicative of a respective state of health of the asset. For example, as further elaborated at page 12, lines 20-32, page 13, lines 1-30, and shown in Tables 1 and 2 of the specification of the present invention, determining an operational mode (such as braking level, acceleration

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level, etc.), indicative of a state of health of the asset is a very different concept than the fault monitoring aspects described by Chou.

Although Chou may describe a data repository 203, such element is used for storing fault data and has virtually nothing to do either with arranging actual usage of the asset in a plurality of operational modes indicative of a state of health of the asset, or with establishing a cost/benefit evaluation of the mobile asset for a proposed future plan of use in light of the state of health of the mobile asset. Accordingly, it is not believed that there is any description or suggestion in Chou that meets each of the structural and/or operational relationships set forth in appellant's claim 26. Anticipation under 35 U.S.C. §102 requires that "The identical invention must be shown in as complete detail as contained in the ...claim." (Citations omitted) Accordingly, it is submitted that Chou fails to anticipate or otherwise render unpatentable claim 26.

Claims 27-29 depend from claim 26 and thus incorporate the structural and/or operational relationships set forth in claim 26 plus their own recitations. It is respectfully submitted that Chou also fails to anticipate such claims under the §102 statutory requirements and these rejections should be withdrawn.

J   _Arguments Regarding Claim 30_

Chou is directed to system and method for vehicle diagnostic and health monitoring. More particularly, Chou describes a system 1000 for <u>fault monitoring</u> and diagnostics, such as any fault reported by ECUs 103. See Chou at col. 4, lines 2-4, and lines 16-19.   The client computer device 101 handles diagnostic trouble codes (DTCs) by listening for <u>vehicle faults</u> through the fault monitor 420. See Chou at col. 4, lines 54-55. The diagnostic engine 201A first determines if a <u>fault</u> or a potential fault is present by checking if any trouble code is reported. See Chou at col. 6, lines 6-8.

It is respectfully noted that the claimed invention is not directed to the fault monitoring aspects described by Chou. Claim 30 in part recites processing the

collected data the data to develop historical information regarding actual usage of each mobile asset. The actual usage is arranged in a plurality of operational modes of the asset. For example, as further elaborated at page 12, lines 20-32, page 13, lines 1-30, and shown in Tables 1 and 2 of the specification of the present invention, determining an operational mode (such as braking level, acceleration level, etc.), is a very different concept than the fault monitoring aspects described by Chou.

Although Chou may describe a data repository 203, such element is merely used for storing fault data and has virtually nothing to do either with arranging actual usage of the asset in a plurality of operational modes of the asset, or with determining the remaining warranty coverage of each respective mobile asset based on the actual usage of the asset. Accordingly, it is not believed that there is any description or suggestion in Chou that meets each of the structural and/or operational relationships set forth in appellant's claim 30. Anticipation under 35 U.S.C. §102 requires that "The identical invention must be shown in as complete detail as contained in the ...claim." (Citations omitted) Accordingly, it is submitted that Chou fails to anticipate or otherwise render unpatentable claim 30.

B.   *Regarding the rejection of claims 7-9, 11, 15-19, and 31-47 under*
35 U.S.C. 103(a) as rendered unpatentable over Chou.

Appellant argues that Chou does not support a *prima facie* case of
obviousness regarding claims 7-9, 11, 15-19, and 31-47 under 35 U.S.C. 103(a)
because Chou fails to teach or suggest each of the claimed structural and/or
operational relationships. With regard to the rejections applied against claims 7-
9, 11, 15-19, and 31-47, it is appellant's belief that not all of the rejected claims
stand or fall together. More specifically, dependent claims (each depending from
claim 1) 7-9, 11, and 37 stand together. Claims 15 and 38 stand together.
Claims 16 and dependent claims 17-19 and 39 stand together. Dependent claims
40-47 respectively depending from independent claims 20-26 and 30, each
stands by itself with its respective parent claim.

M.P.E.P. 2143.04 provides that to establish *prima facie* obviousness of a
claimed invention, all the claims limitations must be taught   or suggested by the
prior art. All words in a claim must be considered for judging the patentability of
the claim against the prior art. If an independent claim is nonobvious under 35
U.S.C. 103, then any claim depending therefrom is nonobvious.

A   *Arguments Regarding Claim 7-9, 11 and 37*

Claims 7-9, 11, and 37 respectively depend from claim 1 and thus
incorporate the structural and/or operational relationships set forth in claim 1 plus
their own recitations. In view of the fundamental shortcomings of Chou for
teaching or suggesting each of the structural and/or operational relationships set
forth in claim 1, it is respectfully submitted that Chou also fails to render claims 7-
9, 11, and 37 unpatentable under the §103 statutory requirements and these
rejections should be withdrawn.

B   *Arguments Regarding Claims 15 and 38*

Claim 15 is directed to a computerized method for managing a plurality of
mobile assets. Claim 15 in part recites processing collected data (regarding each

of a plurality of mobile assets) to develop historical information regarding actual usage of each mobile asset. Claim 15 further recites   posting to an operator of a respective mobile asset, based on the collected data, reminder information to ensure compliance of any applicable regulatory requirements.

Chou is directed to system and method for vehicle diagnostic and health monitoring. More particularly, Chou describes a system 1000 for fault monitoring and diagnostics, such as any fault reported by ECUs 103. See Chou at col. 3, lines 2-4, and lines 16-19. The client computer device 101 handles diagnostic trouble codes (DTCs) by listening for vehicle faults through the fault monitor 420. See Chou at col. 3, lines 54-55. The diagnostic engine 201A first determines if a fault or a potential fault is present by checking if any trouble code is reported. See Chou at col. 6, lines 6-8.

It is respectfully noted that the claimed invention is not directed to the fault monitoring aspects described by Chou. Claim 15 recites processing collected data (regarding each of a plurality of mobile assets) to develop historical information regarding actual usage of each mobile asset. Historical information regarding actual usage of each mobile asset has nothing to do with the fault data of Chou. One skilled in the art would recognize that a fault, as described by Chou, has nothing to do with the actual usage information set forth in the claimed invention, much less with posting to the operator, based on the collected data, reminder information to ensure compliance of any applicable regulatory requirements. Accordingly, it is not believed that there is any description or suggestion in Chou that meets each of the structural and/or operational relationships set forth in appellant's claim 15. Accordingly, it is submitted that Chou fails to render unpatentable claim 15.

Claim 38 depends from claim 15 and thus incorporates the structural and/or operational relationships set forth in claim 15 plus its own recitations. It is respectfully submitted that Chou also fails to render obvious such claim under the §103 statutory requirements and this rejection should be withdrawn.

C   *Arguments Regarding Claims 16-19 and 39*

Claim 16 is directed to a computerized method for managing a plurality of mobile assets. Claim 16 in part recites collecting operator data regarding the operating of each one of a plurality of mobile assets by a respective operator. Claim 16 further recites processing the data to develop historical information regarding the operation of the mobile asset by the respective operator, and posting to the operator, based on the collected data, reminder information to ensure compliance of any applicable regulatory requirements.

Chou is directed to system and method for vehicle diagnostic and health monitoring. More particularly, Chou describes a system 1000 for fault monitoring and diagnostics, such as any fault reported by ECUs 103. See Chou at col. 3, lines 2-4, and lines 16-19.   The client computer device 101 handles diagnostic trouble codes (DTCs) by listening for vehicle faults through the fault monitor 420. See Chou at col. 3, lines 54-55. The diagnostic engine 201A first determines if a fault or a potential fault is present by checking if any trouble code is reported. See Chou at col. 6, lines 6-8.

It is respectfully noted that the claimed invention is not directed to the fault monitoring aspects described by Chou. Claim 16 recites collecting operator data regarding the operating of each one of a plurality of mobile assets by a respective operator. Operator data has nothing to do with the fault data of Chou. One skilled in the art would recognize that a fault, as described by Chou, has nothing to do with the operator data set forth in the claimed invention, much less with posting to the operator, based on the collected data, reminder information to ensure compliance of any applicable regulatory requirements. Accordingly, it is not believed that there is any description or suggestion in Chou that meets each of the structural and/or operational relationships set forth in appellant's claim 16. Accordingly, it is submitted that Chou fails to render unpatentable claim 16.

Claims 17-19 and 39 depend from claim 16 and thus incorporate the structural and/or operational relationships set forth in claim 16 plus their own

recitations. It is respectfully submitted that Chou also fails to render obvious such claims under the §103 statutory requirements and these rejections should be withdrawn.

D   *Arguments Regarding Claims 40-47*

Dependent claims 40-47 respectively depend from independent claims 20-26 and 30 and thus incorporate the structural and/or operational relationships set forth in such independent claims plus their own recitations. In view of the fundamental shortcomings of Chou for teaching or suggesting each of the structural and/or operational relationships set forth in such independent claims, it is respectfully submitted that Chou also fails to render claims 40-47 unpatentable under the §103 statutory requirements and these rejections should be withdrawn.

8.   CLAIMS APPENDIX - 37 CFR 41.37(c)(1)(viii).

A copy of the claims 1-18 involved in this appeal is attached as a claims appendix under 37 CFR 41.37(c)(1)(viii).
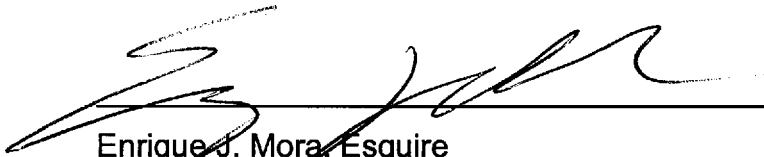
9.   EVIDENCE APPENDIX - 37 CFR 41.37(c)(1)(ix)

None is required under 37 CFR 41.37(c)(1)(ix)

10. RELATED PROCEEDINGS APPENDIX - 37 CFR 41.37(c)(1)(x)

None is required under 37 CFR 41.37(c)(1)(x)

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CLAIMS APPENDIX
37 CFR 41.37(c)(1)(viii)

1. A computerized method for managing a plurality of mobile assets using information indicative of actual usage of each asset, the method comprising:

collecting data regarding each of a plurality of mobile assets;

providing a set of rules comprising relationships for processing the collected data to determine a plurality of operational modes for each asset, each of said operational modes being associated with a distinct level of wear in an asset;

processing the data relative to the set of rules to develop historical information regarding actual usage of each mobile asset, the information for said actual usage being arranged so as to list a plurality of operational modes accumulated for the asset over a selectable period of time; and

distributing the information via a global information network.

2. The method of claim 1 wherein said historical information regarding actual usage of the asset is enhanced with environmental data collected during the actual usage of the asset, with said environmental data comprising at least one environmental parameter contributing to the level of wear of said asset.

3. The method of claim 1 further comprising determining a service recommendation for each respective mobile asset based on the actual usage of said respective mobile asset.

4. The method of claim 3 further comprising communicating said service recommendation to an operator of the mobile asset.

5.   The method of claim 4 wherein said service recommendation includes suggesting a service center able to perform said service recommendation.

6.   The method of claim 5 wherein the suggested service center is based on the position of the mobile asset relative to said service center.

7.   The method of claim 6 wherein the suggested service center is further based on whether said service center is part of a chain of preferred service centers.

8.   The method of claim 1, wherein the step of distributing information further comprises:

linking a data center to the global information network;

linking a service center for the mobile assets to the global information network; and

posting a recommendation for a service activity for one of the plurality of mobile assets on a web site accessible via the global information network.

9.   The method of claim 1, further comprising:

collecting data regarding cargo being transported by the respective mobile assets;

using the data regarding cargo to develop information regarding the cargo;

and distributing the information regarding cargo via the global information network.

10. The method of claim 1 further comprising:

collecting data regarding respective service functions provided through a respective one of the remote assets;

using the data regarding the respective service functions to develop information regarding said functions; and

distributing the information regarding said service functions via the global information network.

11. The method of claim 10, further comprising:

developing a web site including a respective web page including information regarding the service functions performed for each one of a respective plurality of customers; and

providing access to the respective web pages via the global information network to the respective plurality of customers.

15. A computerized method for managing a plurality of mobile assets, the method comprising:

collecting data regarding each of a plurality of mobile assets;

processing the data to develop historical information regarding actual usage of each mobile asset; and

posting to an operator of a respective mobile asset, based on said collected data, reminder information to ensure compliance of any applicable regulatory requirements.

16.   A computerized method for managing a plurality of mobile assets, the method comprising:

collecting operator data regarding the operating of each one of a plurality of mobile assets by a respective operator;

processing the data to develop historical information regarding the operation of the mobile asset by the respective operator; and

posting to said operator, based on said collected data, reminder information to ensure compliance of any applicable regulatory requirements.

17.   The method of claim 16 further compromising analyzing said collected data to verify satisfactory compliance by the respective operator of said regulatory requirements.

18.   The method of claim 19 further comprising posting to said operator economic incentive information to encourage said operator to have the mobile asset serviced by a service center that is part of a chain of preferred service centers.

19.   The method of claim 18 further comprising issuing commands to the mobile asset, based on said collected data, to avoid non-compliance of said regulatory requirements.

20. A computerized method for managing a plurality of mobile assets using information indicative of actual usage of each asset, the method comprising:

collecting data regarding each of a plurality of mobile assets;

providing a set of rules comprising relationships for processing the collected data to determine a plurality of operational modes for each asset, each of said operational modes being associated with a distinct level of wear in an asset;

processing the data relative to the set of rules to develop historical information regarding actual usage of each mobile asset, the information for said actual usage being arranged so as to list a plurality of operational modes accumulated for the asset over a period of time;

using the historical information to develop a failure prediction for at least one of the plurality of remote assets; and

distributing the information via a global information network.

21.   A computerized method for managing a plurality of mobile assets using information indicative of actual usage of each asset, the method comprising:

collecting data regarding each mobile asset of a plurality of mobile assets that together constitute a mobile asset system;

providing a set of rules comprising relationships for processing the collected data to determine a plurality of operational modes for each asset, each of said operational modes being associated with a distinct level of wear in an asset;

processing the data relative to the set of rules to develop historical information regarding actual usage of each said mobile asset, wherein said historical information is classified based on a plurality of operational modes accumulated for the asset over a selectable period of time;

using the historical information to generate recommended operational settings for each asset so as to increase the performance and operating life of the mobile asset system; and

distributing the operational settings via a global information network.

22. A system for managing a fleet of mobile assets using information indicative of actual usage of each asset, the system comprising:

a data gathering element configured to collect data regarding each of a plurality of mobile assets;

a memory device for storing a set of rules comprising relationships for processing the collected data to determine a plurality of operational modes for each asset, each of said operational modes being associated with a distinct level of wear in an asset;

a processor configured to process the collected data relative to the set of rules to develop historical information regarding actual usage of each mobile asset, the information for said actual usage being arranged so as to list a plurality of operational modes accumulated for the asset over a selectable period of time; and

a data link in communication with a global information network for distributing information related to the plurality of mobile assets.

23.   A system for managing vehicles using information indicative of actual usage of each asset, the system comprising:

a plurality of sensors carried on a vehicle for generating data indicative of the operation of the vehicle;

a memory device carried on said vehicle for storing a set of rules comprising relationships for processing the generated data to determine a plurality of operational modes for each asset, each of said operational modes being associated with a distinct level of wear in an asset;

a processor carried on the vehicle for processing said generated data relative to the set of rules to develop information indicative of the operation of the vehicle for its useful life; and

a transmitter for transmitting said information to a global information network for communication to interested parties.

24. A system for managing vehicles using information indicative of actual usage of each asset, the system comprising:

a plurality of sensors carried on a vehicle for generating data indicative of the operation of the vehicle;

a transmitter for transmitting data from the vehicle to a data center;

a receiver at the data center for receiving data transmitted from the vehicle;

a memory device at the data center for storing a set of rules comprising relationships for processing data received at the data center to determine a plurality of operational modes for each asset, each of said operational modes being associated with a distinct level of wear in an asset;

a processor at the data center for processing the received data relative to the set of rules to develop information indicative of the operation of the vehicle over the useful life of the vehicle; and

a data link at the data center for transferring data indicative of the operation of the vehicle to a global information network for communication to interested parties.

25.   A system for managing a vehicle within a fleet of vehicles using information indicative of actual usage of each asset, the system comprising:

a plurality of sensors carried on a vehicle for generating data indicative of the operation of the vehicle;

a memory device for gathering and recording operational data for the life of said vehicle;

a data link in communication with the memory and with a global information network for transferring information relating to the operation of said vehicle to the network;

a first processor configured to process the operational data relative to a set of rules comprising relationships for processing the operational data to determine a plurality of operational modes for said vehicle, wherein each of said operational modes is associated with a distinct level of wear in a vehicle in order to develop individual historical information regarding actual usage of each vehicle, the information for said actual usage being arranged so as to list the plurality of operational modes of the vehicle; and

a second processor accessing a data base of fleet historical information data relating to the operation of other vehicles in the fleet corresponding to said vehicle and evaluating the individual historical information for said vehicle in light of said fleet historical information from said other vehicles in the fleet.

26.   A computerized method for managing a plurality of mobile assets, the method comprising:

collecting data regarding each of a plurality of mobile assets;

processing the data to develop historical information regarding actual usage of each mobile asset, said actual usage being arranged in a plurality of operational modes of the asset, each of said operational modes being indicative of a respective state of health of said asset;

establishing a cost/benefit evaluation of the mobile asset for a proposed future plan of use in light of the state of health of the mobile asset; and

distributing the information via a global information network.

27.   The method of claim 26 further comprising determining a service recommendation for each respective mobile asset based on the actual usage of said respective mobile asset.

28.   The method of claim 26 wherein said economic value of each respective mobile asset is further based on whether any service recommendations for the asset have been complied with.

29.   The method of claim 27 further comprising predicting faults likely to occur based on whether any service recommendations for the asset have been disregarded.

30. A computerized method for managing a plurality of mobile assets, the method comprising:

collecting data regarding each of a plurality of mobile assets having warranties covering the operation of the mobile assets;

processing the data to develop historical information regarding actual usage of each mobile asset, said actual usage being arranged in a plurality of operational modes of the asset;

determining the remaining warranty coverage of each respective mobile asset based on the actual usage of the asset; and

distributing the information via a global information network.

31. The method of claim 30 wherein said warranty coverage determining step comprises adjusting said coverage based on whether any service recommendations for the asset have been complied with.

37. The method of claim 1 wherein the mobile assets are railroad locomotives.

38. The method of claim 15 wherein the mobile assets are railroad locomotives.

39. The method of claim 16 wherein the mobile assets are railroad locomotives.

40. The method of claim 20 wherein the mobile assets are railroad locomotives.

41. The method of claim 21 wherein the mobile assets are railroad locomotives.

42. The system of claim 22 wherein the mobile assets are railroad locomotives.

43. The system of claim 23 wherein the vehicles are railroad locomotives.

44. The system of claim 24 wherein the vehicles are railroad locomotives.

45. The system of claim 25 wherein the vehicles are railroad locomotives.

46. The system of claim 26 wherein the vehicles are railroad locomotives.

47. The method of claim 30 wherein the mobile assets are railroad locomotives.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.